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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,436	11/12/1999	JEFFREY MARK ACHTERMANN	AUS919990655US1	9315

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EXAMINER	
TODD, GREGORY G	
ART UNIT	**PAPER NUMBER**
2157	

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/438,436	ACHTERMANN ET AL.	
	Examiner	Art Unit	
	Gregory G. Todd	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-15,17-26 and 28-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-15,17-26 and 28-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Appeal

1. This is a sixth office action in response to applicant's amendment filed, 17 February 2006, of application filed, with the above serial number, on 12 November 1999 in which claims 6, 17, and 28 have been amended. Claims 1-4, 6-15, 17-26, and 28-33 are therefore pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 12-14, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky (hereinafter "Zolnowsky", 6,779,182) in view of Dorfman et al (hereinafter "Dorfman", 6,134,313).

Zolnowsky teaches, substantially, the invention as claimed including job and thread prioritized scheduled (see abstract).

As per Claims 1, 12, and 23, Zolnowsky discloses a connection scheduling method, wherein Zolnowsky discloses:

determining if a job is available for scheduling (job scheduling) (at least col. 5, lines 13-21);

determining, in response to said step of determining if said job is available, if a session is available, wherein said session is included in a pool of sessions (threads), said pool of sessions having a preselected one of a set of priority levels corresponding to a priority level of said job and wherein said session effects an execution of said job (runnable threads in queue of threads with dispatch priority) (at least col. 6, lines 33-65); and

launching said session to effect said execution of said job, if said session is available (thread (and processor / job) selected for execution) (at least col. 7, lines 17-28; col. 8, lines 43-60).

While Zolnowsky does teach scheduling errors in thread queues (at least col. 8, lines 3-17), Zolnowsky fails to explicitly teach the step of launching an error handling thread in response to an error condition, said error handling thread releasing said session. However, the use and advantages for using such an error handling thread is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Dorfman. Dorfman teaches having a session queue wherein when an error (exception) occurs, the session shuts down the thread and releases the session and resources (at least col. 11 line 38 - col. 12 line 20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Dorfman's session release into Zolnowsky as this would enhance and allow the system of Zolnowsky to be prepared for error handling and as Dorfman teaches, when an exception does occur, it is desirable to release all running resources for the session.

As per Claims 2, 13, and 24.

session comprises a thread (thread) (at least col. 6, lines 33-65).

As per Claims 3, 14, and 25.

creating a connection to a target system for execution of job (target processor being selected) (at least col. 10, lines 21-42).

4. Claims 4, 6-9, 15, 17-20, 26, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky in view of Dorfman and further in view of Northrup (hereinafter "Northrup", 6,671,713).

As per Claim 4, 15, and 26.

Zolnowsky and Dorfman do not explicitly disclose determining if connection is an existing connection, and creating the connection is performed if connection is not an existing connection. However, Northrup teaches if a connection primitives wherein a thread communication service will run upon request for communication (at least col. 4, lines 22-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Northrup's connection primitives into Zolnowsky and Dorfman's system as Northrup teaches communication occurring upon connection commencing.

As per Claims 6, 17, and 28.

Zolnowsky and Dorfman fail to explicitly disclose changing value of a job state from a first value to a second value in response to said launching of said error handling thread. Northrup teaches the use of a thread returning an error condition and "error"

state (at least col. 56, lines 33-36; col. 55, lines 27-35; col. 27 line 66 - col. 28 line 15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of having a value being changed when an error occurs as Northrup discloses into Zolnowsky and Dorfman's system as this would reduce scheduling errors in Zolnowsky and Dorfman's system and define conditions of the thread.

As per Claims 7, 18, and 29.

the first value signaling that the job is available for scheduling (non-errors not being caught in verification step) (at least Zolnowsky col. 8, lines 11-17).

As per Claims 8, 19, and 30.

Zolnowsky teaches retrying the steps of determining if a job is available for scheduling, determining if a session is available, and launching said session (at least Zolnowsky col. 8, lines 11-17; error resulting in selecting correct queue). Dorfman teaches starting another session in response to an error condition (at least col. 11 line 38 - col. 12 line 20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Dorfman's session release into Zolnowsky as this would enhance and allow the system of Zolnowsky to be prepared for error handling and as Dorfman teaches, when an exception does occur, it is desirable to release all running resources for the session and begin a second session.

As per Claims 9, 20, and 31.

Zolnowsky and Dorfman fail to explicitly disclose the step of retrying to be repeated until a predetermined time interval has elapsed. However, the use and advantages for retrying tasks based on elapsed time is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Northrup (at least Northrup col. 10 line 49 - col. 11 line 18). Northrup discloses relaunching after a delay period after it attempts to relaunch immediately. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Northrup's time-interval thread launching into Zolnowsky and Dorfman's system because this would further allow tasks that could not be completed and relaunched the second time to attempt again at a later time when there might be less network congestion, for example.

5. Claims 10-11, 21-22, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky in view of Dorfman and Northrup and further in view of Rangarajan et al (hereinafter "Rangarajan", 6,260,077).

As per Claims 10, 21, and 32.

Zolnowsky, Dorfman and Northrup fail to explicitly disclose registering a callback method in response to an expiry of a predetermined time interval. However, the use and advantages for responding to a time expiration is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Rangarajan (at least Rangarajan Abstract; col. 17, lines 13-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of

Rangarajan's responding to an expiry of an elapsed time into Zolnowsky, Dorfman and Northrup's system because this would invoke an event to cause a thread to occur upon, for example an error, and allow the client application to perform its function and then return control to Zolnowsky, Dorfman and Northrup's host computer (target system) upon the predetermined time interval.

As per Claims 11, 22, and 33.

Zolnowsky, Dorfman and Northrup fail to explicitly disclose the steps of determining if a job is available for scheduling, determining if a session is available, and launching said session being performed in response to an invoking of a callback method by a target system, the target system for execution of said job. However, the use and advantages for a target system responding to an elapsed time expiration is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Rangarajan (at least Rangarajan Abstract; col. 17, lines 13-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Rangarajan's responding to an expiry of an elapsed time into Zolnowsky, Dorfman and Northrup's system because this would invoke an event to cause a thread to occur upon, for example an error, and allow the client application to perform its function and then return control to Zolnowsky, Dorfman and Northrup's host computer (target system) upon the predetermined time interval, and thus have the requested task be entered into the thread and be completed.

Response to Arguments

6. Applicant's arguments filed 17 February 2006 have been fully considered but they are not persuasive.

Applicants argue a) Zolnowsky and Dorfman fail to teach launching an error handling thread in response to an error condition, said error handling thread releasing said session.

In response to a) Zolnowsky does not teach the limitation. However, Dorfman clearly states that when an exception occurs, another thread is 'launched' to shut down the execution thread and further release all resources allocated to the session, and thus releasing the session (at least col. 11 line 38 - col. 12 line 20). Therefore, as can be seen, the process of shutting down the execution thread is in itself, a separate process or thread, said thread being "launched" when an exception or error does occur, otherwise, when there is no exception, the session continues without launching the 'exception thread' to shut down the execution thread.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Dorfman details a software architecture of a server including a session executing threads on a

processor, said session shutting down the execution thread and releasing the resources upon an exception occurrence (see col. 11 line 51 - col. 12 line 5, abstract). Zolnowsky teaches a thread scheduler wherein errors are attempted to be prevented (see abstract; col. 8, lines 3-17) before they occur. Thus, as Zolnowsky teaches error prevention, Dorfman continues that should such an exception occur, the proper process to continue.

Applicants further argue b) Northrup does not teach features of claims 4, 15, and 26; c) the combined teachings of Zolnowsky, Dorfman, and Northrup do not teach features of claims 6, 17, and 28; d) the combined teachings of Zolnowsky, Dorfman, and Northrup do not teach features of claims 7, 18, and 29; e) the combined teachings of Zolnowsky, Dorfman, and Northrup do not teach features of claims 8, 19, and 30; and f) the combined teachings of Zolnowsky, Dorfman, and Northrup do not teach features of claims 9, 20, and 31.

In response to b) Examiner reiterates, Northrup teaches connection primitives wherein a thread communication service will run upon request for communication (at least col. 4, lines 11-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Northrup's connection primitives into Zolnowsky's system as Northrup teaches communication occurring upon connection commencing. Such a "connection" as stated in the claims is found in Northrup as any connection to another system is going to have an initial connection and for an initial connection to occur it has to be aware that the connection is initial and thus determined not to be an existing connection.

In response to c) Northrup is relied on for teaching changing the value of a job state from a first value to a second value. Dorfman, substantially teaches the launching of an error handling thread. The combination of Dorfman with Northrup together with Zolnowsky teaches the dependent claim limitations.

In response to d) Zolnowsky is relied on for teaching the limitation in the claims. Zolnowsky teaches that that every 'job' is available for scheduling and thus has the 'value' associated with it as being available, whereas should there be an error in the verification step, it would not be available.

In response to e) Zolnowsky teaches retrying the steps of determining if a job is available for scheduling, determining if a session is available, and launching said session (at least Zolnowsky col. 8, lines 11-17; error resulting in selecting correct queue). Dorfman teaches starting another session in response to an error condition (at least col. 11 line 38 - col. 12 line 20). Thus, as with a) above, Dorfman states that when an exception occurs, another thread is 'launched' to shut down the execution thread and further release all resources allocated to the session, thus releasing the session.

In response to f) Examiner reiterates, As Applicant agrees at page 16, Northrup teaches performing desired operations at a predefined time and further, such operations as a result of some event later communicated to the service. Thus, such an event, as described above, being an error state, as it would have been obvious to one of ordinary skill at the time the invention was made that the main reason a service would be retried at a later time could only be due to an "error", such as a thread not being available or an error in the thread itself, and that there would be absolutely no reason to retry

something later after it is initially tried except for if there was a problem or "error" condition being met.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Newly cited Rhee et al, in addition to previously cited Hogle et al (col. 8-9; error handling and the use of exceptions) and Periwal et al (col. 12; error handling and the use of exceptions), Cohen et al, Bhagat et al, Silva et al ('760), Hanif et al, Dixon et al, Herbert et al, Brackett et al, Marshall, Teng, Batra, Behm et al, Davis et al, Murray, Trugman, Morris et al, Sundararajan, Beaulieu et al, Farrell et al, Bigus, Silva et al ('537), Zolnowsky and Coffman et al and Ross et al are cited for disclosing pertinent information related to the claimed invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory G. Todd whose telephone number is (571)272-4011. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm w/ first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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